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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,724	11/30/2001	Rolf Bruck	E-41365	7179
24131	7590	10/12/2005	EXAMINER	
LERNER AND GREENBERG, PA P O BOX 2480 HOLLYWOOD, FL 33022-2480			DUONG, THANH P	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/998,724

Applicant(s)

BRUCK, ROLF

Examiner

Tom P. Duong

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Responsive to the request for reconsideration, the prosecution has been reviewed. The office action mailed July 13, 2005 was inadvertently made final and according is withdrawn and the statutory period set therein vacated. A new office action on the merits/follows.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 11 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Ketcham (5,519,191). Ketcham discloses a honeycomb body (Fig. 4), comprising: channels through which a fluid can flow; a plastically deformable (flexible ceramics) and subsequently consolidatable first mass (ceramic sheets) being predeterminably and consolidated (Col. 6, lines 63 – Col. 7, lines 1-6); applied in printed layers (Col. 9, lines 30-36) at least one second mass (metallic sheets) forming along a section through mass; and another printed layer the honeycomb body next to said first said first mass having a second mass property different from that of said second mass and layers are multiplicity interconnected layers disposed one on top of the other.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5-7, 14, and 17-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham et al. (5,519,191) in view of Maus et al. (5,474,746).

Regarding claims 5, 7, and 20, Ketcham discloses a honeycomb body (Fig. 4): comprising: ceramic walls (Fig. 2 and Col. 9, lines 20-43) formed of printed layers (Col. 9, lines 30-32) forming channels through which a fluid can flow, said channels lying next to one another. Ketcham fails to disclose at least one at least one measuring sensor and an electrically conductive mass integrated into one of said ceramic walls. Maus '746 teaches at least one temperature sensor and/or heat conductor 17 (Abstract) extending between the honeycomb corrugated layers 21 and 22 (Fig. 2) to measure the wall temperature of the catalytic converter (Col. 3, lines 55-60). Thus, it would have been obvious in view of Maus '746 to one having ordinary skill in the art to modify the honeycomb body of Ketcham with a temperature sensor and/or measuring conductor as taught by Maus '746 in order to measure the wall temperature of the catalytic converter. Regarding claim 6, the combination of Ketcham '191 in view of Maus '746 provide a honeycomb body with at least one of said measuring sensor and said electrically conductive mass surrounded completely by ceramic. Regarding claim 14, the applied

references fail to disclose the honeycomb body is made completely of ceramic material; however, it is conventional to fabricate the honeycomb body made of ceramic and/or metallic material and it would have been obvious in view of the applied references to one having ordinary skill in the art to fabricate the honeycomb body with either ceramic and/or metallic material since it is a prima facie obvious to select a known material based on its intended use. See *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Regarding claim 17, Ketcham discloses the ceramic foils can be corrugated or other shaped performs, can be stacked and consolidated into curved or other complex shape including stacked flat layers. Note, the court held that a change in shape is obvious over the prior art in the absent of unexpected results. See *In re Dailey*, 357 F.2d 669, 149, USPQ 47 (CCPA 1966). Regarding claims 18 and 19, the direction with respect to fluid flow does not impart patentability to the claims. Note, expression relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd App. 1969) and *In re Young*, 75, F.2d 966, 25 USPQ 69 (CCPA 1935).

3. Claims 8-10, 15, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham '191 in view of Maus '208. Regarding claims 8-10 and 24, Ketcham '191 discloses a honeycomb body (Abstract), comprising: at least partially ceramic walls forming of printed layers (Col. 9, lines 30-32) forming channels (Fig. 4) through which a fluid can flow, said channels lying next to one another (Fig. 4). Ketcham '191 fails to disclose at least one of said walls having a structure for

influencing a throughflow of the fluid; said structure is disposed at least one of longitudinally, transversely and obliquely relative to a direction of the throughflow the fluid in the channels (Figs. 1); and said structure is one of wavy and zigzag-shaped (Fig. 1). Maus teaches walls having structure (inverted regions 4 and 5) which is disposed at least one of longitudinally, transversely and obliquely relative to a direction of the throughflow the fluid in the channels (Figs. 1-3); and said structure is one of wavy and zigzag-shaped (Fig. 1-3). Incorporating such structure (inverted regions) in the honeycomb channels provides a higher catalytic conversion rate than conventional honeycomb body (Col. 2, lines 54-59). Thus, it would have been obvious in view of Maus '208 to one having ordinary skill in the art to modify the honeycomb body of Ketcham with the structure as taught by Maus '208 in order to achieve a higher catalytic conversion rate in the honeycomb body. Regarding claim 15, the applied references fail to disclose the honeycomb body is made completely of ceramic material; however, it is conventional to fabricate the honeycomb body made of ceramic and/or metallic material and it would have been obvious in view of the applied references to one having ordinary skill in the art to fabricate the honeycomb body with either ceramic and/or metallic material since it is a prima facie obvious to select a known material based on its intended use. See *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Regarding claim 21, Ketcham discloses the ceramic foils can be corrugated or other shaped performs, can be stacked and consolidated into curved or other complex shape including stacked flat layers. Note, the court held that a change in shape is obvious over the prior art in the absent of unexpected results. See *In re Dailey*, 357 F.2d 669, 149,

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USPQ 47 (CCPA 1966). Regarding claims 22 and 23, the direction with respect to fluid flow does not impart patentability to the claims. Note, expression relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd App. 1969) and *In re Young*, 75, F.2d 966, 25 USPQ 69 (CCPA 1935).

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham '191 in view of Ohashi et al. '347. Ketcham discloses the claimed invention except an orifice formed therein from one of said channels to another of said channels as a passage for the fluid. Ohashi teaches the orifice (through holes 33) is formed onto the partition walls 32a and 32b to create a turbulence flow in a stream of fluid (Col. 6, lines 40-49) to improve mass and heat transfer (Col. 5, lines 1-9). Thus, it would have been obvious in view of Ohashi to one having ordinary skill in the art to modify the honeycomb body of Ketcham with the orifice as taught by Ohashi in order to create turbulent flow for the fluid, which improve mass and heat transfer.

5. Claims 16 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham et al. '191. Ketcham discloses the honeycomb is made of ceramic and/or metallic sheets but silent with respect to the honeycomb body is made completely of ceramic material. However, it is conventional to fabricate the honeycomb body made of ceramic material and it would have been obvious to one having ordinary skill in the art to fabricate the honeycomb body with either ceramic or ceramic and metallic material,



since it is a prima facie obvious to select a known material based on its intended use. See *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Regarding claim 25, Ketcham discloses the ceramic foils can be corrugated or other shaped performs, can be stacked and consolidated into curved or other complex shape including stacked flat layers. Note, the court held that a change in shape is obvious over the prior art in the absent of unexpected results. See *In re Dailey*, 357 F.2d 669, 149, USPQ 47 (CCPA 1966). Regarding claims 26 and 27, the direction with respect to fluid flow does not impart patentability to the claims. Note, expression relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd App. 1969) and *In re Young*, 75, F.2d 966, 25 USPQ 69 (CCPA 1935).

### ***Response to Arguments***

Applicant's arguments with respect to claims 5-11 and 13-28 have been considered but are moot in view of the new ground(s) of rejection. The limitation of "a printed layer with a plastically deformable and subsequently consolidatable mass" is addressed by the Ketcham '191 reference.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

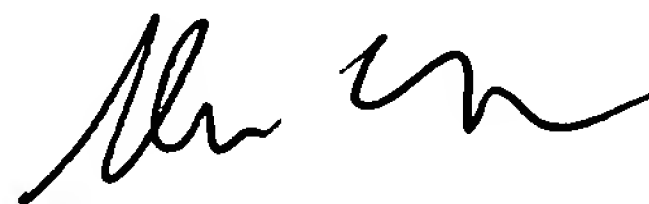


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TD  
October 6, 2005

TD



Glenn Caldarola  
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